



re: Geotechnical Review of Grading Plans
Proposed School Development
620 Triangle Street – Ottawa, Ontario
to: Ottawa Catholic School Board – Donald Wood – donald.wood@ocsb.ca
date: September 17, 2025
file: PG7249-MEMO.03

Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to provide geotechnical design summary details regarding the proposed school development at the aforementioned site. This memorandum should be read in conjunction with the current geotechnical investigation report (Geotechnical Report PG7249-1 dated September 9, 2024) prepared for the aforementioned site.

Grading Plan Review

Paterson reviewed the following grading plan prepared by Robinson Land Development for the aforementioned development:

- ☐ Grading Plan, DWG No: 24093-GR1, Project No. 24093 for the Ottawa Catholic School Board, dated March 2025

Generally, the subsurface profile mostly consists of a deposit of silty clay layer, followed by a deposit of glacial till. It is anticipated that the proposed development will be founded on conventional spread footings placed on an undisturbed very stiff silty clay bearing medium.

Based on our review of the above-noted drawing, the proposed grades throughout the subject site are generally within the permissible grade raise restriction of 1.8 m provided in the aforementioned geotechnical investigation report.

Therefore, the proposed grading is considered acceptable from a geotechnical perspective such that lightweight fill (LWF) or any further measures will not be required to be taken for the proposed development.

Further, sufficient soil cover will have to be provided to perimeter and exterior pad footings if the use of insulation to mitigate the migration of frost will not be required for the subject footings. This may be confirmed at the time of detailed design.



Tree Planting Restrictions

In accordance with the City of Ottawa Tree Planting in Sensitive Marine Clay Soils (2017 Guidelines), Paterson completed a soils review of the site to determine applicable tree planting setbacks. Atterberg limits testing was completed for recovered silty clay samples at selected locations throughout the subject site. Sieve analysis testing was also completed on selected samples. The results of our testing are presented in the aforementioned current geotechnical investigation report.

Based on the results of our testing, the plasticity index of the silty clay deposit at the subject site does not exceed 40%. Therefore, the following tree planting setbacks are recommended for the subject site. Large trees (mature height over 14 m) can be planted within the silty clay areas provided a tree to foundation setback equal to the full mature height of the tree can be provided (e.g., in a park or other green space). Tree planting setback limits may be reduced to **4.5 m** for small (mature height up to 7.5 m) and medium size trees (mature tree height 7.5 to 14 m), provided that the conditions noted below are met.

- ☐ Large trees (mature height over 14 m) can be planted within these areas provided that a tree to foundation setback equal to the full mature height of the tree can be provided.
- ☐ Tree planting setback limits may be reduced to 4.5 m for small (mature tree height up to 7.5m) and medium size trees (mature tree height 7.5 m to 14 m), provided that the conditions noted below are met.
- ☐ A small tree must be provided with a minimum of 25 m³ of available soils volume while a medium tree must be provided with a minimum of 30 m³ of available soil volume, as determined by the Landscape Architect. The developer is to ensure that the soil is generally un-compacted when backfilling in street tree planting locations.
- ☐ The tree species must be small (mature tree height up to 7.5 m) to medium size (mature tree height 7.5 m to 14 m) as confirmed by the Landscape Architect.
- ☐ Grading surrounding the tree must promote drainage to the tree root zone (in such a manner as not to be detrimental to the tree), as noted on the Grading Plan.

High-water demanding tree-species such as poplars, willows, and some maples (i.e., Manitoba Maples) should not be considered in the landscaping design from a geotechnical perspective.



We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Drew Petahtegoose, P.Eng.



September 17, 2025

